IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

		Attorney Docket No.: **BUR920040017US1**
In re Application of:	§	
	§	Confirmation No.: **3807**
BUETI ET AL.	§	
	§	Examiner: **LAM, K.**
Serial No.: **10/709,808**	§	
	§	Art Unit: **2611**
Filed: **28 MAY 2004**	§	
	§	
For: **METHOD AND APPARATUS FOR DYNAMICALLY MANAGING POWER CONSUMPTIONS OF SENDING AND RECEIVING DRIVERS**	§	

APPEAL BRIEF

MS Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The present Brief is submitted in support of the Appeal in the above-identified application.

The fees for the submission of a Notice of Appeal and an Appeal Brief have been paid for under the previous appeal. Due to the increase in fees since the original Notice of Appeal and Appeal Brief were filed in September 2007, authorization is given to charge the difference of $10.00 for the Notice of Appeal and $10.00 for the Appeal Brief to IBM Corporation Deposit Account **09-0456**. No fee or extension of time is believed to be required; however, in the event an additional fee or extension of time is required, please charge that fee to the IBM Corporation Deposit Account **09-0456**.

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REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, the real party of interest.

RELATED APPEALS AND INTERFERENCES

No related appeal is presently pending.

STATUS OF THE CLAIMS

Claims 1-20, which were finally rejected by the Examiner as noted in the Final Office Action dated March 17, 2008 and in the Advisory Action dated April 16, 2008, are being appealed.

STATUS OF AMENDMENTS

An Amendment was submitted on August 13, 2007 in reply to the Final Office Action dated July 17, 2007.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The claimed invention is related to a method for managing power consumptions of a sending driver and a receiving driver. After receiving data from a sender, the sending driver sends the data to the receiving driver via a transmission line. According to Claim 1 (and similarly Claim 11), a sensor is coupled to the sender and the sending driver (page 5, line 28; sensor **26** of Figure **2**). The sensor adjusts the supply voltage level to the sending driver according to the amount of data that needed to be sent by the sender (page 5, line 28 - page 6, line 19; data level detector **31** within sensor **26** of Figure **3**). The sending driver subsequently transmits the data on the transmission line to the receiving driver according to the adjusted supply voltage level (page 7, lines 5-7; sending driver **23** and transmission line **25** of Figure **3**).

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner's rejections of Claims 1-20 under 35 U.S.C. § 103(a) as being unpatentable over *McClennon et al.* (US 6,721,355) in view of *Morishita* (US 6,184,744).

ARGUMENT

The Examiner's rejections of Claims 1-20 were not well-founded and should be reversed.

I. *McClennon*'s teachings direct to outgoing data only and not to incoming data as claimed

Claim 1 (and similarly Claim 11) recites a step of "in response to an amount of data that needed to be sent by said sender, adjusting a supply voltage level by said sensor to said sending driver accordingly."

On page 5 of the Final Office Action, by characterizing *McClennon*'s data traffic predictor **120** shown in Figure **3** as the claimed sensor, the Examiner asserts that the claimed adjusting step is disclosed by *McClennon* in col. 4, lines 43-65.

According to *McClennon*, the periodicity of the incoming traffic is determined by monitoring the incoming data traffic at a communications link (col. 4, lines 47-50). One of the two power modes (*i.e.*, a full on power mode and a quiescent power mode) of a modem is then selected according to the determined periodicity of the incoming data traffic (col. 4, lines 50-52). Since *McClennon*'s teachings are related to incoming data traffic, it is not relevant to the claimed adjusting step concerning data needed to be sent (*i.e.*, outgoing data).

In the remaining portion of the Examiner's cited passage (*i.e.*, col. 4, lines 53-65), *McClennon* further teaches that the data traffic predictor can be utilized to estimate data traffic over a communications link to permit power management in the modem. Again, *McClennon*'s teachings are related to incoming data traffic only, and not related to outgoing data. For example, *McClennon* teaches that the data traffic predictor includes a data traffic monitor for detecting incoming data traffic at the modem as well as the arrival rate of the incoming data. The data traffic predictor also includes a periodicity detector for processing arrival rate as well as

periodicity of the incoming data, and a power mode controller for determining one of the two above-mentioned power modes for modem operations based on the determined periodicity of the incoming data traffic. Thus, *McClennon*'s data traffic predictor is designed to handle incoming data traffic, which is not relevant to the claimed adjusting step concerning data needed to be sent (*i.e.*, outgoing data).

Because the claimed invention recites novel features that are not taught or suggested by *McClennon*, the § 103 rejection is improper.

II. *McClennon* is related to incoming data instead of outgoing data as claimed

Claim 1 also recites a step of "transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted supply voltage level."

On page 5 of the Final Office Action, the Examiner asserts that the claimed transmitting step is disclosed by *McClennon* in col. 4, lines 8-18.

In col. 4, lines 8-18, *McClennon* teaches that a method for power management in a modem attached to a communications link includes monitoring a communications link for incoming data traffic, and if data traffic is detected on the communications link, the periodicity of the incoming data is determined. The power mode of the modem is then determined based on the determined periodicity of the incoming data traffic. Once again, since *McClennon*'s teachings are related to incoming data traffic, it is not relevant to the claimed transmitting step that is related to data to be transmitted.

In col. 1, lines 17-41, *Morishita* teaches the reduction of operating power supply voltage for the purpose of reducing power consumption. Appellants agree with the Examiner that the reduction of power supply voltage allows the power consumption to be reduced in proportion to the square of the voltage reduction ratio, as explained in col. 1, lines 22-24 of *Morishita*. However, *Morishita* still does not teach or suggest the claimed adjusting step that is performed "in response to an amount of data that needed to be sent by said sender." In other words, the

supply voltage level is adjusted in response to an amount of data that needed to be sent. *Morishita* does not teach or suggest such voltage adjustment. In addition, the claimed adjusting step involves both increasing and decreasing power supply voltage level, and not just the reduction of power supply voltage, as taught by *Morishita*.

Because the claimed invention recites novel features that are not found in the cited references, whether consider separately or in combination, the § 103 is believed to be overcome.

CONCLUSION

For the reasons stated above, Appellants believe that the claimed invention clearly is patentably distinct over the cited reference, and that the rejections under 35 U.S.C. § 103 are not well-founded. Hence, Appellants respectfully urge the Board to reverse the Examiner's rejection.

Respectfully submitted,

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ATTORNEY FOR APPELLANTS

CLAIMS APPENDIX

1. A method for managing power consumptions of a sending driver and a receiving driver, wherein said sending driver sends data received from a sender to said receiving driver via a transmission line, said method comprising:

coupling a sensor to said sender and said sending driver;

in response to an amount of data that needed to be sent by said sender, adjusting a supply voltage level by said sensor to said sending driver accordingly; and

transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted supply voltage level.

2. The method of Claim 1, wherein said method further includes adjusting a transmission frequency by said sensor to said sending driver according to said amount of data needed to be sent by said sender.

3. The method of Claim 2, wherein said method further includes transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted transmission frequency.

4. The method of Claim 1, wherein said sensor includes a data level detector.

5. The method of Claim 1, wherein said sensor includes a programmable voltage regulator.

6. The method of Claim 1, wherein said sensor includes a clock frequency selector.

7. The method of Claim 1, wherein said method further includes coupling a controller to said receiving driver.

8. The method of Claim 7, wherein said method further includes adjusting a supply voltage level by said controller to said receiving driver according to the voltage level of data on said transmission line.

9. The method of Claim 7, wherein said controller includes a pulse amplitude detector.

10. The method of Claim 7, wherein said controller includes a programmable voltage regulator.

11. An apparatus for managing power consumptions of a sending driver and a receiving driver, wherein said sending driver sends data received from a sender to said receiving driver via a transmission line, said apparatus comprising:

a sensor coupled to said sender and said sending driver;

means for adjusting a supply voltage level to said sending driver according to an amount of data that needed to be sent by said sender detected by said sensor; and

means for transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted supply voltage level.

12. The apparatus of Claim 11, wherein said sensor further includes means for adjusting a transmission frequency of said sending driver according to said amount of data needed to be sent by said sender.

13. The apparatus of Claim 12, wherein said sending driver further includes means for transmitting data on said transmission line to said receiving driver according to said adjusted transmission frequency.

14. The apparatus of Claim 11, wherein said sensor includes a data level detector.

15. The apparatus of Claim 11, wherein said sensor includes a programmable voltage regulator.

16. The apparatus of Claim 11, wherein said sensor includes a clock frequency selector.

17. The apparatus of Claim 11, wherein said apparatus further includes a controller coupled to said receiving driver.

18. The apparatus of Claim 17, wherein said controller further includes means for adjusting a supply voltage level to said receiving driver according to a voltage level of data on said transmission line.

19. The apparatus of Claim 17, wherein said controller includes a pulse amplitude detector.

20. The apparatus of Claim 17, wherein said controller includes a programmable voltage regulator.

EVIDENCE APPENDIX

Other than the Office Actions and responses already of record, no additional evidence has been entered by Appellants that is relevant to the present appeal.

RELATED PROCEEDINGS APPENDIX

There is no related proceeding as described by 37 C.F.R. § 41.37(c)(1)(x) known to Appellants, Appellants' legal representative or assignee.